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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,795	11/21/2003	Robert R. Wood	HO-P02901US1	2945
26271	7590	09/27/2005	EXAMINER	
FULBRIGHT & JAWORSKI, LLP 1301 MCKINNEY SUITE 5100 HOUSTON, TX 77010-3095			RICHARD, CHARLES R	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/719,795

Applicant(s)

WOOD, ROBERT R.

Examiner

C. R. Richard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/27&9/17/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Applicant has commented in the IDS filed February 27, 2004 that priority was being claimed under 35 USC 120 to application 09/767,362. The Examiner has not been able to find any other evidence of such a claim; there is no such indication on any transmittal form, in the oath/declaration, in the PTO's PALM system, in the ADS or in the specification. In fact, under the heading "CROSS-REFERENCE TO RELATED APPLICATIONS" in the specification, Applicant has written "Not applicable." It is also of note that 09/767,362 is an application not owned by Applicant and is to an invention in the computer related art; perhaps Applicant meant 09/767,352.

Under the circumstances, the Examiner will assume that Applicant has abandoned any priority claims relating to the present case. If this is not the case, then Applicant may wish to review applicable procedures and make petition accordingly if that avenue is still available.

### ***Information Disclosure Statement***

2. The information disclosure statement filed February 27, 2004 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language – specifically patent SU 1,121,396. This reference has

been placed in the application file, but the information referred to therein has not been considered.

3. The information disclosure statement filed February 27, 2004 also fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed – specifically the Kirk-Othmer reference. No copy is in the file, so the information referred to therein has not been considered.

#### ***Oath/Declaration***

4. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02. The oath or declaration is defective, because it does not identify the citizenship of each inventor.

#### ***Specification***

5. The disclosure is objected to because of the following informalities. Paragraph 18 is incomplete – apparently Applicant forgot to delete it before filing. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims requires an expansion to at least 40% of an original size - which is a contraction. For examination on the merits, it will be assumed that Applicant meant an expansion of at least 40% of the original size instead.

8. Claim 8 is rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph. The claim contains more than one sentence. For examination on the merits, the Examiner will consider the limitations in both sentences.

9. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim depends from itself. For examination on the merits, the Examiner will assume that Applicant meant to make claim 9 depend from claim 7.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Knapp in US Patent 3,901,316. Knapp discloses a process (and corresponding composition) for decreasing permeability in a subterranean formation (see column 1, lines 4-6).

Knapp discloses injecting an oil-in-water emulsion containing asphalt in the oil phase into a permeable formation (see column 1, lines 55-60) that may be followed by a step of selective perforation (see column 1, lines 10-25). An oil solvent such as diesel may be included (see column 3, lines 48-57). Rubber particles among others may be suspended in the emulsion with particle sizes ranging from less than about 10 to more than about 2000 microns (see column 4, lines 30-40). A cellulose ether (a form of cellulose fiber) may be used as a suspending agent (see column 4, lines 40-45). Crumb rubber is one particularly suitable particle (see column 4, lines 52-54), and is

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commercially available in sizes ranging from 100 microns or less to over 4000 microns (see column 4, lines 54-56). A manipulation of pH is used in placing the material in the right place in the formation, as well as used in determining how far into the formation the plugging goes (see column 2, lines 15-50). Of course, the composition described by Knapp is suitable for use as a drilling fluid additive, especially one for reducing lost circulation.

The density range of claims 3 and 8, and the expansion limitation of claims 6 and 9 are inherent in crumb rubber, especially of the commercial type described (see column 4, lines 59-60). This rubber would of course expand upon heating to some extent as required in claim 7. Applicant has basically admitted all this in paragraphs 30 and 33 of the specification.

The preparing and injecting steps of claims 10-13 are explicitly given in the reference as seen above. The composition as a pill (at least effectively) is implied in the disclosures mentioned above, and the forcing step is implied/inherent in what is described above.

12. Claims 1, 3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Brothers et al. in US Patent 5,779,787. Brothers discloses a well cement with rubber particles. The rubber is preferably derived from recycled tires and is in the 10/20 to 20/30 mesh range; this rubber is commercially available (see column 3, lines 39-44). As a point of reference, 10 mesh is 2000 microns, 18 mesh is 1000 microns and 48 mesh is 425 microns (see paragraph 28 of the specification). The density and expansion

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limitations of claims 3 and 6 are inherent in this type of rubber. Of course, this cement could be used as a drilling fluid additive.

13. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Wood in US Patent Application Publication 2002/0010100 (the publication of the application that later issued as US Patent 6,518,224). Note that it appears that this publication is by the same inventor as the present application, but since no proper claim to priority was made, the cited publication is available against the present application.

Wood describes a drilling fluid additive for fluid loss prevention containing crumb rubber of particle size 1 to 400 microns; this rubber can expand to 140% of its original size in a hydrocarbon, and even further when heated (see paragraphs 24-27). The density of the particles is 8.5 to 10.5 ppg (see paragraph 30). Various hydrocarbons may be used in the additive such as diesel oil (as well as all the others named in rejected claims 4 and 12) (see paragraph 31). Various cellulose fiber containing materials may be added (see paragraph 34).

The steps of claims 10-13 are given in paragraph 33.

14. Claims 1, 3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Benko et al. in US Patent Application Publication 2002/0091167 (the parent of this application has issued as US Patent 6,380,269 and has similar disclosure). Note that in the event that Applicant obtains priority to earlier filed applications in the present case,



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the cited reference here may still be available under 102(e) and such a rejection is hereby made here in the alternative.

Benko discloses a crumb rubber within the range of 325 mesh (44 microns) to 20 mesh (840 microns) – a preferred upper limit is 40 mesh (420 microns) (see paragraph 19). The density and expansion limitations of claims 3 and 6 are inherent in this type of rubber. The material can of course be used as a drilling fluid additive.

### ***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. Claims 1-2, 4-5, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knapp in US Patent 3,901,316 especially in view of Delhommer et al.

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in US Patent 4,633,950 and Sheeler in US Patent 2,894,906. Knapp has been discussed in detail above. Delhommer and Sheeler disclose methods and compositions for lost circulation control.

Knapp discloses all the limitation of the rejected claims explicitly or implicitly. It does not explicitly disclose all the various hydrocarbons of claims 4 and 12, but does disclose the use of oil solvents with diesel as a specific example as seen above. It would have been obvious to one of ordinary skill in the art to employ any of the other hydrocarbons of claims 4 and 12 in place of diesel, especially crude oil, mineral oil, gasoline, naphtha or kerosene (crude oil and major cuts of crude oil) from the teachings cited from Knapp. This substitution (and others) is especially obvious in view of the teachings of Delhommer; in a similar context, Delhommer teaches that the lost circulation effect becomes active when the rubber particles come into contact with a hydrocarbon such as crude oil, diesel oil, kerosene, mineral oil, gasoline, naphtha, toluene, ethylene dichloride and mixtures thereof (see Delhommer at column 5, lines 30-35 and column 6, lines 20-35).

Further, as seen above, Knapp teaches the use of a type of cellulose fiber in the context of claim 5. It would have been obvious to one of ordinary skill in the art to employ cellulose fibers in this context from this teaching. This would have been especially obvious in view of Sheeler in US Patent 2,894,906 where rubber particles are made to adhere to fibers such as cotton (basically cellulose) for use in fluid loss prevention (see Sheeler at column 3, lines 25-45).

17. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood in US 2002/0010100 especially in view of Knapp in US 3,901,316. Wood and Knapp have been discussed in detail above. Wood meets all the limitations of the rejected claims in the proper context as seen above, but does not teach the full range of particle sizes claimed.

Wood teaches that crumb rubber is generally 3/8 inch or less in size (8000 microns or less), and says that in the practice of the invention there that the crumb rubber **should** (not must) have a size of 1 to 400 microns (see paragraph 25 of Wood). It would be have been obvious to one of ordinary skill in the art to employ crumb rubber particles in the context of Wood of sizes somewhat larger than 400 microns (and somewhere below 8000 microns) from this teaching. Note that "a *prima facie* case of obviousness exists where the claimed ranges and the prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties" (see MPEP 2144.05). Wood teaches a preferred range of 20 to 400 microns at paragraph 25, negating any inference that one would notice any significant difference if one used particles at any size over 400 microns. Seemingly, 425 microns (one size suggested by the specification at paragraph 28) would be in the "obvious" range.

In a similar context, Knapp teaches the use of particles of up to 2000 and even 4000 microns (see above). From this and the above discussion on Wood, it would have been obvious for one of ordinary skill in the art to use rubber particles in the context of Wood in sizes up to 2000 and up to 4000 microns.

### ***Double Patenting***

18. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

19. Claims 1-13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,518,224. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Claims 1,1,2,2,3,4,5,6,7,8,9,10,11,12,13 and 14 of US 6,518,224 recite compositions or methods within the scope of rejected claims 1,2,1,2,3,4,5,4,6,7,8,9,10,11,12 and 13, respectively, rendering the rejected claims at least obvious.

### ***Conclusion***


20. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. US 2,342,588; 2,743,223; 3,158,210; 6,806,232 and 2004/0244978 teach methods and/or compositions at least similar to the present invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. R. Richard whose telephone number is 571-272-8502. The examiner can normally be reached on M-Th, 8am-6pm and alternate Fridays, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*CR Richard*

  
**PHILIP TUCKER**  
**PRIMARY EXAMINER**  
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